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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,052	01/26/2001	Veijo Vanttinen	324-010115-US(PAR)	7249

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EXAMINER	
MEHRPOUR, NAGHMEH	
ART UNIT	**PAPER NUMBER**
2686	7

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/771,052	VEJJO VANTTINEN	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-16, 18, 20-33, are rejected under 35 U.S.C. 102(e) as being anticipated by Naghian et al. (US Patent Number 2003/0148774 A1).

Regarding claims 1, 18, Naghian teaches a method/packet-switched radio system comprising:

a network part of the radio system (see figure 4, 10), which comprises a core network (SGSN, 3G-MSC, GMLC-HLR) (see figure 1, 14, 12) and a radio network 10 connected to the core network 41/40 (see figure 4), a radio UM connection from the radio network to a subscriber terminal 7 (UM, see figure 4, page 3 section 0031, section 0038); and

the network part comprising location service (see figure 4) means for locating the subscriber terminal 7 (page 3 section 0035); and

the subscriber terminal 7 comprises means for transmitting a request message for location service to the core network via the radio network (page 3 section 0037);

the network part comprises means for performing at least one function required in the-request message and means for transmitting a response message to the subscriber terminal via the radio network (see figure 4, page 3 section 0039).

Regarding claims 3, 20, Naghian teaches method/a radio system wherein the information included in the request message comprises desired quality of service of the requested location service (page 4 section 0044).

Regarding claims 4, 21, Naghian teaches a method/a radio system wherein the other information comprises at least one of the following parameters:

receiving power of the serving cell (page 9 section 0124), receiving power of at least one neighboring cell, charge level of the battery in the subscriber terminal, information on the conditions at the location of the subscriber terminal, identity of a separate device connected to the subscriber terminal.

Regarding claims 5, 22, Naghian teaches a method/a radio system wherein the subscriber terminal comprises means for inserting at least part of the information included in the request message received by the core network (see figure 4) into the request message (page 5 section 0050).

Regarding claims 6, 23, Naghian teaches a method/a radio system wherein the radio network comprises means for inserting at least part of the information included in the request message received by the core network into the request message (page 5 section 0050).

Regarding claims 7, 24, Naghian teaches a method/a radio system wherein, if the function is location of the subscriber terminal, a special location procedure will be performed . More accurate location information can be obtained through a differential GPS. In addition to the GPS, any other similar system capable of providing reliable location information can be used for this. There are several other proposals for providing location information that is more accurate than the information that is based on cell coverage area. It is also possible to have a system where several different location service accuracy classes are provided, wherein the method used for the location determination depends of the requested accuracy. For special location procedures, the required accuracy may be indicated e.g. by so called quality of service (QoS) parameters included in a location information request (page 4 section 0044).

Regarding claims 8, 25, Naghian teaches a method/a radio system wherein the core network comprises means for locating the subscriber terminal on the basis of the information included in the request message (page 4 section 0045).

Regarding claims 9, 26, Naghian teaches a method/a radio system, wherein the procedures required by the location service comprise receiving signals in the subscriber terminal and measuring them, or transmitting signals from the subscriber terminal (page 4 section 0044).

Regarding claims 10, 27, Naghian teaches method/a radio system wherein the signals received in the subscriber terminal to implement the location service comprise signals transmitted by the radio system including signals transmitted by other base stations of the radio system than by that of the serving cell, or the signals transmitted by a satellite of the GPS system (page 4 section 0044).

Regarding claims 11, 28, Naghian teaches method/a radio system wherein the network part of the radio system comprises means for checking whether the location of the subscriber terminal carried out corresponds to the target set for the quality of service (page 4 sections 0044. 0045).

Regarding claims 12, 29, Naghian teaches a method/a radio system wherein, if the target set for the quality of service is not achieved, the network part will perform a location service, which offers a better quality of service (page 4 section 0045).

Regarding claims 13, 30, Naghian teaches a method/a radio system wherein tracing of the route traveled by the subscriber terminal is performed so that the subscriber terminal 40 at regular intervals transmits a request message requesting location of the subscriber terminal (page 4 section 0044).

Regarding claims 14, 31, Naghian teaches a method/a radio system wherein tracing of the route traveled by the subscriber terminal is performed so that one parameter to be added to one

location request is a definition of the need to determine the location of the subscriber terminal at regular intervals (page 4 section 0044).

Regarding claims 15, 32, Naghian teaches a method/a radio system wherein the outside client of the radio system is informed of the location of the subscriber terminal by the core network, by the subscriber terminal (page 5 section 0050).

Regarding claims 16, 33, Naghian teaches a radio system wherein the response message contains at least one of the following pieces of information: the location of the subscriber terminal, location assistance data (page 4 section 0042), a ciphering key for decrypting the location assistance data, an error code, information on whether location information on the subscriber terminal is to be submitted to an outside client.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 2, 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jesse et al. (US Patent Number 6,104,929) in view of King et al. (US Patent Number 2003/00111511 A1).

Regarding claims 2, 19, Naghian teaches a method/a radio system wherein the request message relates to one of the following location service functions (page 3 section 0039):

determination of the subscriber terminal location, informing of an outside client of the radio system of the subscriber terminal location (page 4 section 0046), transmission of location assistance data to the subscriber terminal (page 4 section 0042).

Naghian fails to teach transmission of a ciphering key for decrypting the location assistance data to the subscriber terminal. However King teaches of a ciphering key for decrypting the location assistance data to the subscriber terminal(page 5 section 50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of King with Naghian, in order to reduce the effect of disturbance and achieving a desired error problem rate that may require switch packet retransmission, which reduce the capacity of radio link.

4. **Claims 17, 34,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghian et al. (US Patent Number 2003/0148774) in view of Korpela (US Patent Number 6,311,055).

Regarding claims 17, 34, Naghian fails to teach a method/a radio system wherein the request message and the response message are messages of protocol layers that correspond to the third layer of the OSI model. However Korpela teaches wherein the mobile of third generation known by universal mobile telecommunications system (UMTS) transferred amount of data most preferably in the radio resource control (LLC) of layer 3 structure according to International Standardization Organization (OSI) (col 4 lines 11-17, lines 32-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the above teaching of Korpela with Naghian, in order to determine whether the identified mobile is still connected to the voice channel of the system for the purpose of detecting fraud. In order to determine a bill which is proportional to the transformed amount of payload data.

Response to Arguments

5. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for formal communications indented for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II. 2121 Crystal Drive, Arlington. Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Lester Kincaid be reached (703)306-3016.

NM

July 13, 2004